

## TERRITORIAL CONSERVATION COMMISSION

(Continued from Page Nine.)

years, under the direction of the Territorial government. At the present time the total area of existing forest reserves is 444,116 acres, or about one-tenth of the total area of the Territory. Later it is expected considerably to increase the area so set apart.

In certain of the leeward districts, where the question of stream protection does not enter, the Hawaiian forest has commercial value, and is being systematically exploited. The principal products are ohia lehua railroad ties and koa lumber—in the trade called Hawaiian Mahogany—a fine grained, rich-colored hardwood, of value for interior finish and cabinet work.

The forest work of the Territory is carried on by technically trained men, Hawaii being one of the eleven States of the Union to employ a professional forester.

**Lands.**—Outside of the lands now under cultivation and those that should be kept permanently under forest there are considerable areas that with the application of water could unquestionably be made of high productive value. This class of land is now used principally for cattle grazing. In the aggregate it includes many thousand acres. It would appear that much of it is susceptible of reclamation for some more intensive form of agriculture. Here again the present need is for a thorough and careful study by experts. It should first be ascertained how much of this class of land can be brought under irrigation and second for what purposes it is best adapted if an adequate water supply were once assured. This indicates that along with a hydrographic survey there should also be a soil survey and a systematic classification of the land according to the uses to which it is best adapted. Such investigations pave the way for the incoming of the man who can successfully establish a home and build up a self-sustaining industry.

In addition to the lands that can be reclaimed through irrigation there are in Hawaii large tracts of waste land, such for example as areas covered by comparatively recent lava flows. Much of this class of land must always remain as waste land but portions of it are probably susceptible of being turned to useful account. A systematic classification of all lands would be a long step in this direction.

### Organization and Work of the Commission.

The Territorial Conservation Commission of Hawaii was appointed by Governor Frear on July 23rd, 1908. Upon the organization of the Commission at a meeting held on July 31st, 1908, it was decided to take up the investigation through committees, as follows:

**Forests:** Messrs. Hosmer and Gartley.

**Waters:** Messrs. Gartley and W. O. Smith.

**Lands and Soils:** Messrs. J. G. Smith and Dillingham.

The several committees at once set about getting statistics and other information. Some of these data are submitted herewith in the form of appendices. Other data are not as yet in shape to be given out but will form the subject of a later report. The statements made in the appendices, while accurate as far as they go are therefore to be considered as preliminary only and subject to amplification.

It is perhaps not surprising that it has taken longer to collect accurate information concerning the natural resources of the Territory and their present condition than was at first anticipated. Many of the figures essential to such a compilation were found not to be available or only obtainable after extended inquiry. This condition has brought home to the Commission the extreme desirability of having in Hawaii some Territorial official charged with the duty of compiling statistics. On almost all the lines of inquiry before the Commission it should be possible to get facts and figures but as it is

now the desired data are only to be had from individuals and corporations. There is no impropriety in the making public of the greater part of these data, nor are the corporations who have them unwilling to let them be so used. If there were a Territorial Statistician to attend to the collection of these and similar data valuable information on many subjects which it now takes weeks of labor to obtain would be available for instant reference.

### Recommendations.

As a result of the study that has so far been made the Territorial Conservation Commission of Hawaii is unanimously of the opinion that for the best interests of the Territory there is urgent need of action looking to the conservation and more systematic use of the natural resources of the Territory.

To this end the Commission makes the following recommendations:

First. That active steps be taken to secure from the Territorial Legislature at its coming session an appropriation of not less than \$5000 per year for a topographic and hydrographic survey of the Territory of Hawaii, to be made by the U. S. Geological Survey.

Following the usage customary in such cooperative agreements, the appropriation should be made contingent on the expenditure of an equal sum by the Federal government. Such a survey would serve as a basis for a later and more extended study of the problems of reclaiming the many thousand acres of potentially agricultural land that require irrigation for successful development.

It is further recommended that this project be brought to the attention of the proper departmental authorities in Washington in such a way as to attract their interest and support.

Second. That there should be undertaken under the auspices of the Territorial government a careful and thorough classification of the public lands of the Territory, with especial reference to the adaptability of those not now under cultivation for use in the development of diversified industries.

Third. That further to make available accurate information of assistance to prospective settlers and others appropriate action be taken to secure the extension to Hawaii of the soil survey conducted by the Bureau of Soils of the United States Department of Agriculture.

Fourth. That in view of the fact that the successful development of diversified industries in Hawaii depends in large measure on making the agricultural lands accessible, the importance of good roads and other means of inland transportation be emphasized.

In Hawaii there are no internal waterways to assist in transportation. Consequently it is the more necessary that adequate appropriations be made by the Territorial and local authorities for the building and upkeep of the principal and secondary roads.

Fifth. That an appropriation be secured at the coming session of the Legislature for a Territorial Statistician.

Such an official should properly be attached to one of the existing departments. The salary should be sufficient to secure the services of a capable person and provision should be made for a certain amount of clerical assistance.

Sixth. That a systematic attempt be made to develop and more firmly to establish diversified industries in the Territory.

To this end the Hawaii Experiment Station should receive not only the moral but the financial support of the Territory, in order that it may enlarge the scope of its work, particularly in the way of establishing local demonstration areas.

Very respectfully,

(Signed) RALPH S. HOSMER,  
WILLIAM O. SMITH,  
A. GARTLEY,  
W. F. DILLINGHAM,  
JARED G. SMITH.

Territorial Conservation Commission of Hawaii.

### APPENDIX "A."

#### Report of the Committee on Forests.

Honolulu, Hawaii, Nov. 14, 1908.

For a clear understanding of the forest situation in Hawaii it is necessary that one be acquainted with the conditions of topography and local climate. Lying in the belt of the northeast trade winds and being mountainous, it follows that the Hawaiian Islands have a climate characterized by contrasts. On the windward slopes of the mountains is an area of high precipitation; in the leeward districts scant rainfall, even approaching aridity, is the rule. These facts, coupled with the remarkable porosity of the soil, due to its volcanic origin, have a very direct bearing on the forest situation.

There are two main classes of forest in Hawaii. Both are of economic value; one because it helps to conserve the water needed for irrigation, power development and domestic supply, the other because it produces wood and timber. The forests of the former class are as a rule situated on the moist, windward slopes of the higher mountains. They are essentially "protection forests" in that their main value rests in the water that can be got from them. Those of the latter class, the

commercial forests, are found in the districts where, because of the absence of running streams, watershed protection does not figure. The forests of the first class are by long odds the most important, for in Hawaii the relation between sustained stream flow and a watershed protected by a forest cover is intimate and peculiarly direct.

Hawaii is a country essentially dependent on agriculture. The main crop is sugar cane. On more than half of the fifty-four plantations irrigation is essential for successful cultivation, for although the soil in the leeward districts is rich it requires water to be made commercially productive. Water is also needed on the non-irrigated plantations for the development of power for the fluming of cane. The important part that irrigation plays in Hawaii may perhaps be made more apparent by the statement that over fifteen million dollars has been expended, wholly by private enterprise, in developing the irrigation systems that supply water to the cane fields of the irrigated plantations.

The importance of the forest is generally recognized in Hawaii and has led to a strong public sentiment in favor of forestry. This finds expression in a Territorial Forest Service charged with the creation and administration of forest reserves and with the prosecution of other forest work. During the past five years under a definite forest policy systematically followed, sixteen forest reserves have been set apart, with an aggregate total area of 444,116 acres. Of this area, 273,912 acres, or 61 per cent., is land belonging to the Territorial Government. The other 39 per cent. is in private ownership, but for the most part the owners of the lands, fully aware of the benefits of forest protection, cooperate actively with the Territorial Government in the management of the forest reserves.

There are three main types of forest in Hawaii, the koa and ohia forest, lying between the elevations of two and six thousand feet; the mamani forest, a pure stand of another native Hawaiian tree found on the upper slopes of the higher mountains; and the introduced algaroba forest, which occurs at the lower levels on the leeward side of each of the larger islands.

The typical Hawaiian forest is of the first type. The forest consists of a dense jungle of trees, high growing shrubs, tree-ferns and climbers, with much undergrowth and a heavy ground cover of ferns and bracken. Altogether it is a plant community admirably adapted for the conservation of moisture, for preventing erosion and for serving as a reservoir to feed the springs and streams that rise within its bosom. The most important trees are ohia lehua (*Metrosideros polymorpha*) and koa (*Acacia koa*).

The forest in all the forest reserves is of this type. A recent compilation of the forest areas of the Territory shows that the koa and ohia forest covers approximately 1,175,000 acres. Of this area it is estimated that eventually about three-quarters of a million acres will be included within forest reserve boundaries, of which about 70 per cent. will be government land.

Above the level of the koa and ohia forest, on the slope of Mauna Kea (elevation 13,825 feet), on the island of Hawaii, is found a nearly pure stand of another native Hawaiian tree, mamani (*Sophora chrysophylla*). This forest occurs in a belt lying between the elevations of 6000 and 8,500 feet. The area of the mamani forest on Mauna Kea is 63,500 acres. Mamani occurs elsewhere in the Territory, but does not at the present time form what may be called forests. It is, however, spreading rapidly so that in future years it will play a much larger part than it does now.

Mamani makes excellent fence posts, for which purpose the trees in the upper forest belt are cut for local use. No accurate figures as to the number cut are now available. Otherwise this type of forest is unimportant commercially.

The algaroba (*Prosopis juliflora*) is the mesquite of the Southwest. This tree was introduced into the Islands in 1837. It has now spread so as to cover between fifty thousand and sixty thousand acres below an elevation of 1000 feet in the leeward districts of the larger islands of the group. It is spreading rapidly along the leeward coasts and is also gradually climbing to a higher elevation.

The algaroba forest is the largest single source of fuel supply in the Territory. It is estimated that over 2000 cords are sold annually in Honolulu. The price varies from \$12 to \$14 a cord, delivered.

The algaroba forests are further of value because the pods make good stock feed and also because the tree is one of the important plants locally for bee food. It is estimated that for the calendar year 1907, the total amount invested in apiaries and other equipment for the manufacture of algaroba honey was \$125,000 and that the gross receipts for algaroba honey products for the year were over \$25,000.

It has already been shown that the primary value of the Hawaiian forest rests in the influence it exerts on the conservation of water and that the commercial aspect relatively takes second place. But in the leeward districts on the island of Hawaii are considerable areas where owing to the great porosity of the soil there are no permanently running streams. Here the main value of the forest rests in the wood and timber that it can be made to produce. The two Hawaiian woods of commercial importance are koa and ohia lehua. Both are heavy, close-grained hardwoods. Koa is used for interior finish, furniture, cabinet work and veneering. It is now sold in the markets of the American mainland under the name "Hawaiian mahogany." Ohia is valuable for railroad ties. The systematic lumbering of this class of Hawaiian forest began in October, 1907, when a contract for ninety million board feet of ohia railroad tie material was made between a local company and the Santa Fe Railway.

A tie mill with a daily capacity of 2500 ties has recently been erected. The first regular shipment of ties is about to be made. No accurate estimate either of the amount of timber or the exact area covered by forests of the commercial class have yet been

# BUICK MODEL 10

Won First Place among American Cars, and  
Second Place in International Light Car Road Race

**A**FTER LEADING THE ENTIRE FIRST HALF of what proved to be the most exciting and most stubbornly fought speed battle in automobile racing history, the Buick Model 10's gasoline tank came loose and because of stops totaling over twenty minutes from this trouble, the Buick lost the 196-mile Savannah race by six minutes.

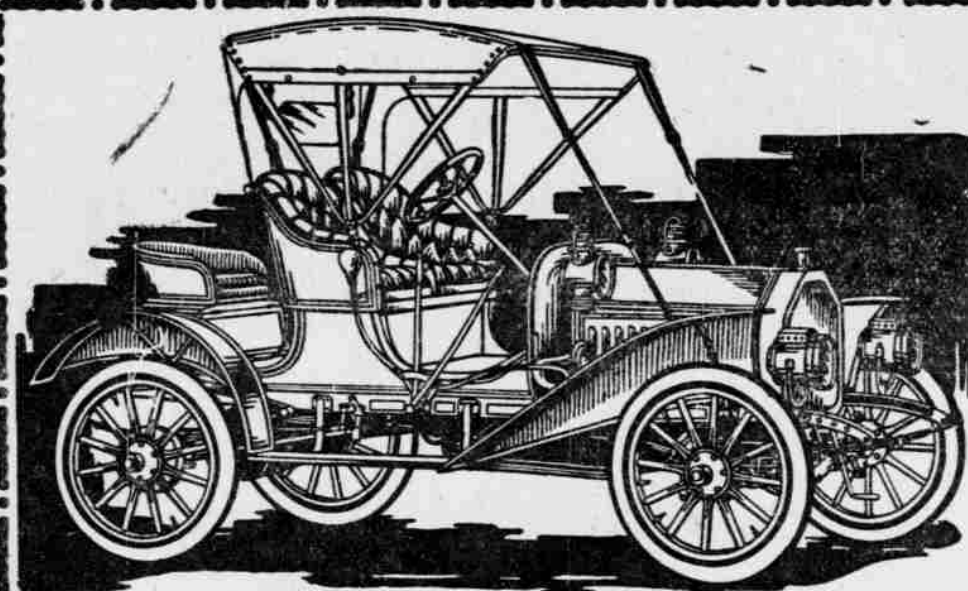
Hilliard in his \$3300 Lancia won and all credit is due him. Burman in his \$1000 Buick gave him the fight of his life and brought his car in with such a lead over the remaining contestants that there was no question concerning the standard which the Buick has set in low-priced automobile construction.

E. A. Hearne of Chicago, driving his own car, a Buick Model 10, won fourth place and was at all times a contender for the highest honors.

The great duel between the leaders was a sight which the spectators will never forget. The Buick used was a regular stock chassis except that for the sake of securing less clearance, the frame and machinery were under hung. Our regular motor, transmission and axle parts were used.

During the entire race, the hood over the engine was not raised. Michelin tires were used and absolutely no tire trouble was had. 70 miles per hour was made on the smooth straight-away stretches. The three fastest laps made in the race were made by the Buick. The Buick made each of 17 laps in less than 11 minutes. The length of each lap was 9.8 miles.

The fastest lap of the race was made by the Buick in 10 minutes and 8 seconds.



**Buick  
Motor  
Co.;**  
Flint,  
Michigan.

**The von Hamm-Young Co., Ltd.**

Agents

## High and Low

ALL JAPANESE READ

### THE HAWAII SHINPO

An authority among Japanese News papers, published in the Territory of Hawaii.

The only Illustrated 10-page Japanese Daily in Existence.

12-page Sunday Issue is the Best Advertising Medium.

Job Work in Japanese and Chinese a specialty.

made, but the area is sufficient and the stand heavy enough to justify the continuation of lumbering operations for a considerable time.

The fact that none of the native trees in Hawaii furnish construction timber has led to extensive tree planting, both by the Territorial Government and by private interests. This work has been going on for the last thirty years and is constantly increasing in extent and importance. The trees principally planted are several kinds of eucalyptus, the Australian ironwood and silk oak, and the Japanese cedar. Wood and timber cut from the planted forests in Hawaii is now being used for fence posts, railroad ties, bridge timbers and wagon work. Practically all the construction timber used in Hawaii is imported from Puget Sound and Northern California, mainly redwood and Northwest (Douglas fir).

In the reports of the U. S. Department of Commerce and Labor it is stated that for the fiscal year ending June 30, 1907, there was imported into Hawaii from the mainland thirty million six hundred and three thousand feet, board measure, of timber boards and planks, valued at \$565,425. For the same year 17,476,000 shingles, valued at \$39,207, and other unmanufactured lumber to the value of \$116,756 were also imported, making in all a total of \$721,388 for unmanufactured wood products. The value of manufactured wood products imported during the same fiscal year was \$214,648. Further comment on the desirability of doing even a little towards securing a local source of supply is unnecessary.

It may perhaps be pertinent in closing this statement to note that a forest fire law similar to that of California was enacted by the Territorial Legislature at the Session of 1905. The Territorial Superintendent of Forestry is ex officio Chief Fire Warden, and provision is made for a corps of district fire wardens to be paid for duty actually performed.

As a matter of fact, plantation managers and other influential citizens agreed to take these positions without remuneration. The law provides penalties in case of damage resulting from the careless or malicious use of fire. Since its enactment there have been few fires of consequence, due in part to a better public sentiment created by the presence of the law on the statute books and to the interest aroused in the matter at the time of the enactment of the law.

(Signed) RALPH S. HOSMER,  
A. GARTLEY,  
Committee on Forests.

## THE SMALL FARMER

Can secure our assistance in endeavoring to find a market for his products. We are engaged in the business of selling Groceries, Provisions and numerous articles required by the farmer for the daily use of his family. We believe we may be able at the same time to sell his products; some of them anyway if not all.

If the farmer will let us know what he has to sell, when it will be ready for market, how packed and how to be shipped, with probable quantities in each shipment; give us in advance all the information he can; we will at once start investigating the market conditions and advise him of same.

We sell to family consumers throughout the Islands for CASH, money with order, and many acknowledge that they are saving money every month. We want the farmers' family trade and will sell their products for CASH also, so as to furnish the necessary "GOLD LUBRICANT" to keep the farm running smoothly. No order too small or too large for us to undertake.

Get the CASH HABIT in buying and selling.

**THEO. F. LANSING**

Commission Merchant,

Importer, Jobber and Retailer.

93 and 95 King Street,

P. O. BOX 351.

Honolulu.

## THE OSTEOPATH

BELIEVES it unwise to administer Drugs for the purpose of increasing Cell Resistance, lest they act harmfully upon the Body Tissues. Knowing that the Lymph contains all the remedial agents necessary to effect a cure or to destroy bacteria, he directs his efforts to improve the quality and quantity of the blood and to promote a free circulation of the same.

DR. F. SCHURMANN.

HOURS—8 to 9 a. m.

OFFICE—224 Emma square.

4 to 6 p. m.

## The Best Beef

in the Territory

**C. Q. Yee Hop & Co.**

Next the Fishmarket

## Scott's Emulsion

clothes the nerves and muscles with warm fat, fills the veins with rich blood.

It makes children rugged and hardy and fearless of the cold. It fills the whole body with warmth and life and energy.

Thin people sometimes gain a pound a day while taking it.

Send this advertisement, together with name of paper in which it appears, your address and four cents to cover postage, and we will send you a "Complete Handy Atlas of the World" as a gift. SCOTT & BOWNE, 409 Pearl Street, New York